

Befuddled Biologists

Biologists "will have to abandon two centuries of observation and rational thinking about biology, because this can't be explained by ordinary physical laws." Paul Newmark, deputy editor of prominent British medical journal *Nature*, was referring to new findings which show that the body's immune system functions in a way no-one can explain.

Solutions of human antibodies somehow continue to work even when all the antibody molecules have been removed from them; the solution keeps reacting with specific blood cells even when no antibodies are present.

There is no known physical reason for this; it indicates there is some unknown way the solution 'remembers' the presence of antibody molecules and acts as if they were still there.

"This has really shaken up our world," said Patricia Fortner, immunology research associate at the University of Toronto. "Even people who have seen this phenomenon find it hard to believe, because it's hard to conceive what could be happening here."

In about 70 different trials conducted in several different labs (all with various scientific controls) over the course of a year, no way has been found to challenge the original experiment, which seems to back up the concepts behind homoeopathy. Homoeopathic remedies are used in extremely small doses and fine dilutions and must be vigorously shaken or 'potentised' before they will work. It was found that the 'homoeopathic' human antibody solution must also be shaken for about 10 seconds or the experiment will fail. If the solution is heated or frozen, the experiment will also fail.

The report was presented by reputable researchers from Canada, France, Israel and Italy and was chiefly authored by Dr J. Beneviste of the French Medical Research Council. *Nature* printed the story with an unprecedented disclaimer, saying that while they (and the researchers themselves) disbelieved the findings, they felt bound to publish them as they couldn't be refuted.

"We couldn't find anything wrong," Mr Newmark said.

- *Nature* (July), AP



Genetic Stream Thins

Plants used to produce 25% of all Western medicines are under threat of extinction, according to the World Health Organization (WHO) and international conservation groups.

At a week-long conference earlier this year in Chiang-Mai, Thailand, doctors and scientists from the U.S., Europe and Asia heard that 80% of the world's population still relies exclusively on medicinal plants for their well-being - plants which are rapidly disappearing along with their surrounding ecosystems.

"Perhaps it is among the species that have gone forever that major anti-cancer and anti-AIDS compounds might have been found," said Professors Norman Farnsworth and Djaja Soejarto from the College of Pharmacology at the University of Illinois in Chicago. They claim that potentially valuable plant species are dying out at the rate of two per day.

The conference was told that up to 70,000 plants are used in traditional medicines worldwide, but by the year 2050, 60,000 species - or 25% of those which remain - are expected to be wiped out by humanity.

The WHO is also calling for countries to place more emphasis on these traditional medicines, many of which are collected, not cultivated. The U.S. National Cancer Institute is searching the world's tropical rainforests for medicinal plants; most of these have not yet been tested in the West, where temperate plants provide the ingredients for most phar-

U.S., S.U. & THEM

President Reagan told Mikhail Gorbachev that the US and Soviet Union could easily forget their differences if space visitors attacked Earth.

Reagan told of the Geneva conversation at Fallston High School in Maryland.

"I couldn't help but say to him, just think how easy his task and mine might be in these meetings that we held if suddenly there was a threat to this world from another species from another planet outside in the universe," Reagan said after addressing students.

AAP

maceuticals. Some tropical species of major medicinal importance, including quinine and cocaine, can't be substituted by synthetic compounds.

Farnsworth and Soejarto call for a "massive screening programme" of tropical plants; "Despite its alarming rapid depletion rate, the tropical rainforests still represent a great storehouse of medicinal genetic resources which may yield important drugs.

"Because of the large number of species which are projected to become extinct within a decade or so... urgent measures must be taken to uncover and exploit fully the potential value of the rainforest species."

The conference was organised by the WHO, the International Union for the Conservation of Nature, the World Wildlife Fund, two U.N. agencies and the Thailand government.

Professor John Considine, a horticulturist from Murdoch University, told the recent ANZAAS congress that agronomists and Aborigines should work together to demonstrate the usefulness of native foods.

"Australian natural plant resources are distinguished from those of other lands not by their innate worth but by the lack of effort devoted to domesticating and formalising the harvesting of that resource," he said, adding that there's market potential for our unique native food crops, essential oils, pharmaceuticals, forage plants and floriculture.

NORTH SEA GASPING

The North Sea, once one of the world's richest fishing grounds, faces a total ecological crisis due to humanity's mismanagement. If industrial, nuclear and agricultural waste dumping continues, the North Sea will itself become toxic.

Many of Europe's most polluted rivers flow into the North Sea. Waste dumping and oil and gas drilling are also taking their toll.

A lethal carpet of yellow-green algae 20km wide and 100km long has been killing fish from Bergen in Norway to Gothenburg in Sweden. The algae coats fish in slime and suffocates them - in some areas all marine life has disappeared to a depth of 10 metres. Almost all marine life off southern Norway is dead. The algae is lethal in concentrations of three million parts per litre; present concentrations around Norway range from 5 million to 30 million per litre. The slime is thought to be due mainly to nitrogen runoff from fertilizers and uses up oxygen to grow.

In less than a month early this year, 306

dead seals were washed up on the west German coast. Dutch scientists have discovered a fierce virus may be responsible for the mysterious deaths of almost 2,000 north European seals from April to July.

Jens Enemark, Danish head of the combined Dutch, West German and Danish Waddings Sea Secretariat in Wilhelmshaven put the seal death toll in these areas at 1,800.

"But the number is rising every day and there is little hope of stopping the epidemic," he said. The seals are succumbing to viral pneumonia and a virus which attacks their intestines. Dutch virologists have also found widespread evidence of herpes in the seals. The intestinal virus is very aggressive. "It starts off in the intestines and virtually eats its way through to other vital organs," Mr Enemark said.

It's likely that this massive viral infection is due to a total immune breakdown in the seals - due to a toxic, stress-filled environment caused by human pollution. *Reuter*



Stonehenge Riot (again)

Police clashed with thousands of rainbow warriors representing a broad spectrum of British society last (northern hemisphere) Summer Solstice. In the most serious confrontation at the Stonehenge megalith circle, where there is a ban on 'unlicensed' congregation, hundreds of police clashed with 3,000 people encamped around the site, resulting in 9 serious injuries and 67 arrests.

While the battle raged with bottles and rocks pelting police in riot gear, a police helicopter hovered overhead and thousands chanted "We want the stones," a group of white-robed Druids conducted their Solstice celebration.

"This is one of the saddest days of my life," said Chief Druid Tim Sebastian. "We must, all of us, work to see that such appalling

scenes of desecration and mayhem are never allowed to happen again."

The annual public congregations at the fenced-off site, surrounded by motorways and army bases, were banned in 1985. An annual walk from London to Stonehenge attracts many people from all walks of life each summer, including heavy representation by pagans, anarchists and flower children.

A month before the Solstice a stone slab was discovered in the Daugleddau River near Haverfordwest, Dyfed, in Wales which is believed to have been intended for use at Stonehenge in Salisbury. The dolomite slab is believed to have been lost while being transported by river from Cairn Meini on the Preseli Hills, 135 miles from Stonehenge.

AP, London Observer

FOOD IRRADIATION

World-wide resistance to food irradiation is growing. The British Government decided last February to maintain a ban on irradiation of food until there is sufficient consumer protection and last year the European Parliament refused to approve its clearance. The European Committee for Food called for a general ban because there was no proof of safety to health or the environment. Last December the International Organization of Consumer Unions called for a world-wide moratorium until nutrition, safety, labeling and detection issues are resolved. In February the UK Government admitted there isn't enough data on irradiation effects on food additives, contaminants, pesticide residues or packaging materials.

It appears that the World Health Organization (WHO) has relied largely on information provided by nuclear industries for its assessment of food irradiation.

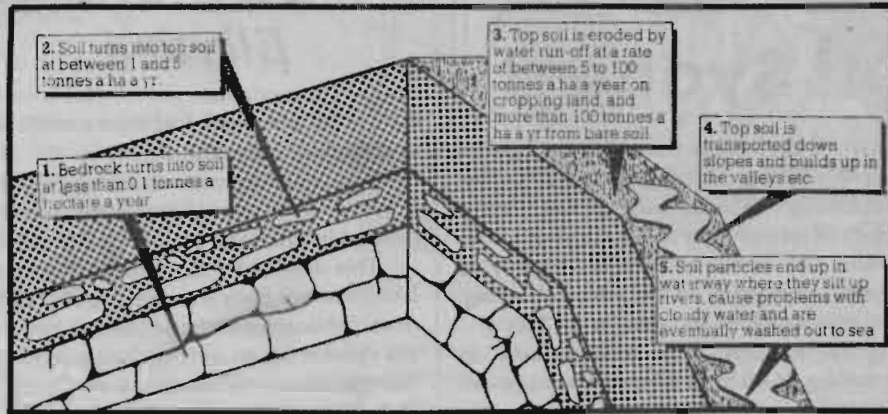
"It could be one of the greatest con jobs we have seen," said Keith Wright, chairman of the ALP Caucus committee on consumer affairs. "The nuclear industry is arguing in favour of irradiation, using the WHO report as the basis for saying it's safe, whereas WHO relied on information from the nuclear industry in the first place." The Joint Expert Committee on Food Irradiation of the International Atomic Agency and the Food and Agricultural Organization used the WHO document to paint a rosy picture of food irradiation.

The Caucus committee has passed a broadly supported resolution calling on the WHO to produce a new scientific report which covers toxic effects of irradiated food.

Meanwhile, a Melbourne food-processing company was named in Parliament in late May as having distributed a leaflet leaked to *The Australian* advertising food irradiation as one of its services. Cotter Food Services Pty Ltd was alleged to have offered its clients irradiation of freeze-dried chicken meat, saying "gas or gamma sterilisation is available on request". The company, which has given evidence to a House of Representatives standing committee about the banning of food irradiation, denied offering irradiation or printing of the leaflet and said they didn't know its source.

Mr Wright said there's every reason for Australia to say no to irradiation and that we, Canada and New Zealand should stop proliferation of food irradiation to the Third World.

Australia is in a unique position to persuade the WHO to stop food irradiation; an influential marketing conference sponsored by the International Atomic Energy Authority is being held in Australia in December.



Soils Ain't Soils

Farmers who cause soil erosion and salt problems on other properties should be penalised on a 'polluter pays' basis, according to the Federal National Soil Conservation Program.

A Federal tax on soil degraders has been proposed by Dr David Oram of Melbourne's La Trobe University. Water and wind-induced soil erosion costs Australia an estimated \$2 billion a year in lost production.

Dr Oram also urged the Soil Conservation Program to give farmers direct Federal subsidies to encourage responsible land use, like the tax concessions now available for fencing, damming and contour construction.

Salinity is caused by the removal of trees from upper catchment areas and their replace-

ment by shallow-rooted crops. More water percolates through the soil and raises the natural saline water-table throughout the catchment area. Farmers who cause salination are often unaffected by the problem themselves.

"But farmers further down the slope of the water-table are already paying a big price in terms of lost land, downgraded capital values and foregone production," said Dr Oram.

"Taxes or levies are unpleasant, but those causing the problem are rarely affected by it."

The Federal Government is spending \$47 million to combat salination and erosion in the next 3 years and predicts that the Murray-Darling Basin could be a desert within a century. The Basin covers about one-seventh of

Australia and contributes 30-40% of our total rural production. Salination of the Murray already costs the economy an estimated \$215 million a year, according to the Minister for resources, Senator Cook.

In just 5 years from 1982 to 1987 the area of salinity seepage there doubled to an estimated 10,000 hectares.

Soil Erosion

Soil erosion has been described as the nation's major agricultural problem by the Federal minister for Primary Industry, Mr Kerin. Sloping land with less than one metre of soil is most at risk of soil erosion, according to the National Soil Conservation Program. Many farms in northern NSW are losing soil at 10 tonnes a hectare annually; more than 100 times faster than the soil is naturally replaced.

A study based on trials at six NSW rural centres found that nearly all farms were losing soil faster than it was being replaced.

"Some of our farms could be unproductive in less than three generations from now," said NSW Soil Conservation Service researcher Keith Edwards, the study's author.

"That isn't very long when you consider that many of them have only been in use for 40 to 50 years.

"... a property can suffer little or no soil loss for several years and then lose more than 100 tonnes a hectare in one rainstorm." Mr Edwards claims that many farmers are reluctant to adopt simple soil conservation methods like leaving cereal stubble on paddocks during high rainfall periods.

News from Space

Mars Probes

The USSR has launched two unmanned probes to Mars. *Phobos I & II* were launched from the Baikonur Space Centre five days apart in July for a journey lasting about 200 days.

"The goal of the mission is to explore Mars and its satellite Phobos, the Sun and interplanetary space," according to *Tass*. The probes are planned to come within 50 metres of Phobos and each lower a landing craft.

One probe will move around in 20 metre hops while the other will remain anchored to the surface.

They will also conduct detailed mapping of the Martian surface and atmosphere.

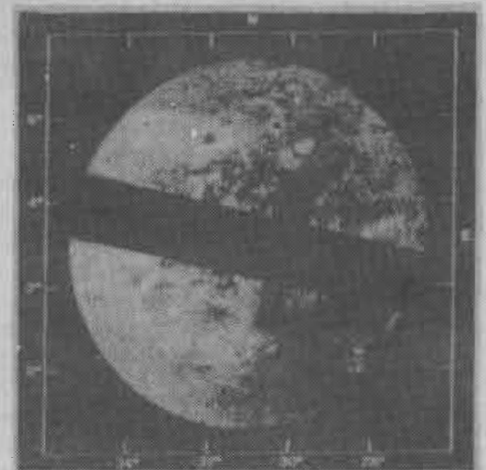
The next unmanned Soviet flight is planned for 1996-98, which is expected to bring back Martian rock samples.

Venus Mapped

Exactly ten years after the US launched a Pioneer probe to orbit the planet Venus, American scientists have published new Earth-based radar pictures which show what are probably lava flows, craters and volcanic mountains. It seems that Venus has volcanoes like Earth and Mars, despite its radically different, thick acidic atmosphere. Some shapes are highly reflective, suggesting the presence of iron pyrites and other metallic minerals. The largest of these masses is 560 km long. These metals deteriorate over time, so Venus has either had very recent and massive vulcanism - or the surface is much younger than expected.

The planetary orbiter has mapped over 90% of Venus' surface, revealing 10,000 metre mountain peaks and is expected to continue functioning until 1992.

Agence France-Presse



Oil Drilling Off Sydney!

The NSW and Federal Governments have allowed oil exploration drilling off the coast between Newcastle and Wollongong. Santos Ltd and Ampol Exploration have been granted permits to drill 9,360 square kilometres of seabed inside and outside the three-mile limit. Natural gas has recently been found onshore in the area.

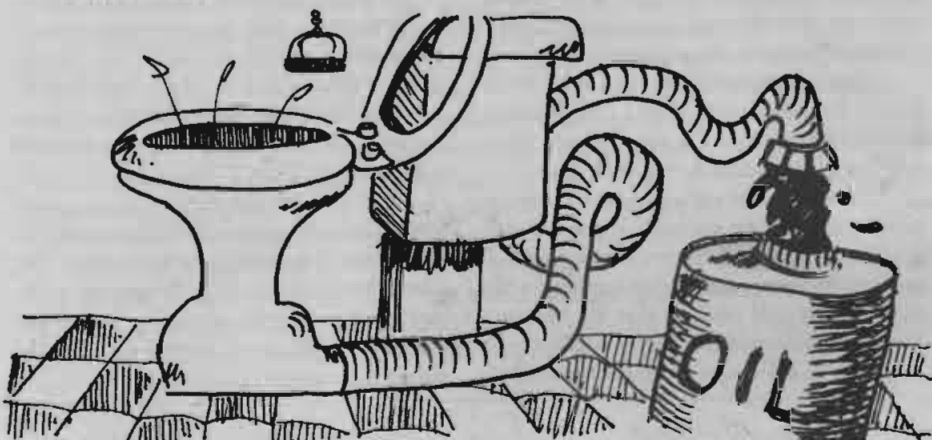
"Any plan to explore and drill for oil next to the most heavily used beaches in Australia is totally unacceptable," said Milo Dunphy of Sydney's Total Environment Centre.

"A major blow-out could coat the coastline in oil." He said seismic testing alone could disrupt whale migrations and drive away dolphins and fish.

Adelaide-based Santos said the first three

years of exploration would involve seismic surveys (interpretation of shockwaves from explosions on the sea bed), followed by two years of seismic tests and the drilling of two wells. Oil would be pumped directly to Sydney, according to Dr John Armstrong, executive exploration manager for Santos.

Sydneysiders have become used to watching an oil rig drilling new sewage outfalls off their beaches for months. If we are to use oil at all, we must consider where it comes from and accept it in our own front yard - or use viable alternatives which are now becoming publicly available. Otherwise, Australia faces an oil deficit of \$22 billion by the year 2000 and our environment will continue to break down. see map



Sewage to Black Gold

A treatment plant has opened in Perth which turns human sewage into oil. In a pilot exercise for what may become an Australia-wide scheme, sewage sludge - the slimy solid substance left after sewage treatment - is transformed into diesel oil.

The facility, designed by Campbell Environment Ltd (CEL), mimics and accelerates the natural formation of oil at the West Australian Water Authority's sewage treatment plant. The plant takes under 24 hours to make oil suitable for low-speed diesel engines.

Processing 50 tonnes of sludge would be worth \$12 million a year, and NSW State Minister for the Environment Mr Hodge says the plant could solve the problem of safe sludge disposal. Most sludge is now incinerated as other disposal methods are too hazardous.

CEL is looking at the possibility of incorporating the plant into Canberra's 50 tonne-a-day sludge incinerator.

"It is estimated the oil-from-sludge technology produces 300 litres of fuel per tonne of sludge. Thus a sizable portion of a plant's operating costs can be recovered," said CEL director Mr Brindal.

In the conversion process water is first removed, the solid is heated to 450 degrees C in an oxygen-free environment and the gases produced are condensed and converted into oil. The remaining solids form a char; the process imitated and speeds up natural processes.

"A further by-product of the process is char, similar to coal, which can be used to run the process or can be sold," said Mr Brindal.

The Australian

Computer Crashes Election

The computer which had been specifically designed to count the ballots in the July Mexican elections crashed, taking the election with it. Results of the polls have been delayed indefinitely.

This didn't stop the ruling Institutional Revolutionary Party from making their traditional public announcement that they had won the election by an overwhelming majority. The opposition coalition has claimed "a fraud of major proportions."

The Guardian

Mayan Codex Decoded

The writing system of the ancient Mayans has finally been decoded by a West German archaeologist, Wolfgang Gockel.

Gockel claims to have decoded the ancient pictographs which portray humans, animals and apparently abstract patterns. He says they describe the power struggles, sexual intrigues, wars and natural disasters in a highly structured and sophisticated society.

The decoded writings come from the town of Palenque in South Mexico, which was a powerful city-state 1300 years ago. Most of the writings are concerned with the lives of rulers who had titles such as "Lord of Time" and "Holder of True Power" and historical dates were carefully noted. Purification by fasting and abstention from sex for several days, followed by body piercing to draw sacrificial blood are also described.

The Mayan culture was crushed by the Spanish in the 17th Century.

Stern, Reuter





Natural Gas Fuel

Natural gas may be used to fuel your car under a new Swiss scheme being trialled by Australian Gas Light (AGL).

Motorists can hook up converted cars to their home gas supply or gas stations using the system, designed by Sulzer Bros. Ltd. Car conversion costs are estimated at about \$1,300; but 60 litres of gas costs under \$3 - about one-tenth the price of petrol. Because of extra gas burned to achieve the same power, gas is about one-quarter the price of petrol.

AGL claims running costs will be slashed by more than half, because gas burns cleaner than petrol and causes no emission problems. The trade-off is a 10-15% reduction in engine power and reduced range on a tank.

AGL plans to lease small compressors to consumers which pump the gas from the home supply into the car; it would take about 9 hours to fill a 60-litre tank. Larger commercial compressors can fill a tank in 3 minutes. Like LPG, converted cars could be 'dual-fuel' and immediately switch back to petrol if required.

This scheme is a great first step to weaning ourselves and the world off fossil fuels.

Oils Burn in Africa

Midnight Oil's recent *Diesel and Dust LP* and *Beds Are Burning* single topped the South African charts earlier this year.

The band, led by musician and proto-politician Peter Garrett, have donated South African profits from the records to the African National Congress and the Federated Union of Black Artists. In the first three months the album sold 60,000 copies.

"It's ironic that the profits are coming from a wide spectrum of South African society," said Mr Marco Boni, the South African Vice-Consul in Sydney. "I'm sure if they knew where the money was going they wouldn't be so keen to buy the records."

UNBORN TV ADDICTS

Babies can become addicted to their mother's favourite soap opera in the womb and are calmed after birth by the same theme music, according to British medical journal *Lancet*.

Dr Peter Hepper, a psychologist at Queen's University, Belfast, tested the babies of seven mothers who regularly watched the series *Neighbours*. He played the soap's theme music to babies four to five days after birth along with eight other babies whose mothers didn't watch the series. Six out of the seven 'Neighbours' babies stopped crying when the music was played; only two of eight in the control group stopped crying.

The six babies adopted a "quite alert state" as the theme tune started, said Dr Hepper.

"Mothers addicted to these programs report settling down with a cup of tea and feet up to watch them, so they may be said to be relaxed," he said. "The foetus may become conditioned to the tune."

NDP WOOD-DUNN SNAFU

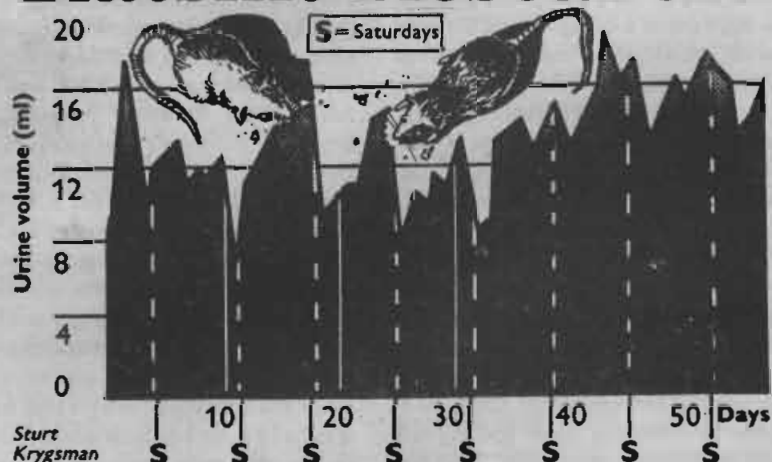
The High Court declared in May that Senator Robert Wood (*see interview in Issue 4*) was ineligible to be a Senator due to the fact he was a British citizen when elected. Many in the Nuclear Disarmament Party thought that Irina Dunn - who beat Elaine Nile in a recount, deciding the result of Robert Wood's seat - would pass the position back to Wood. Her decision not to has fueled some discontent.

"She has never been prepared to let the party decide what should happen with the seat," Mr Wood claimed in July.

Sen. Dunn said that "Anybody would be disappointed to lose a Senate position, but what's most important to the 287,000 voters are issues like Lucas Heights and the lack of a port safety plan for nuclear warship visits in Sydney Harbour."

Mr Wood said he was now open for any job offers.

Ratshit Research



Laboratory rats, like the extra-dimensional mice of *The Hitchhiker's Guide to the Galaxy*, may have had the last laugh. CSIRO research into rat behaviour has shown that rats are far more sensitive to what happens around them than scientists believed - and laboratory rats *behave differently when they're being studied* than when they are not!

Subtle stimuli such as the amount of noise or movement in a laboratory alter rat behaviour and metabolism and ruin the conclusions of many studies using rats and other animals.

CSIRO researchers at the Hobart Fisheries Research Station noticed that their rats were defecating far less on weekends than weekdays. Dr June Olley and Stephen

Thrower worked for months on unravelling the secret of the rats' bowel movements and contacted a Czech scientist who had noted the same thing in the 1950s.

The rats are too frightened by the students during the week to have a "decent feed and a crap," Mr Thrower said. On weekends they eat, urinate and defecate less because they're calmer.

"We might find that people have measured and published findings that are ascribed to factors that don't exist because of these other factors," he said.

"In a way, it looks (like) the humans are the ones being duped by the rats." (see graph)

Quake Query

The largest reactor at Lucas Heights would not survive a major earthquake, according to the Federal Government's Nuclear Safety Bureau (NSB). Work to strengthen the reactor and prevent a disastrous coolant-loss accident will take 12 to 18 months to complete.

The NSB has asked the reactor's management to prove Sydney residents are not at risk in the intervening time. The reactor can withstand minor quakes and one bad enough to seriously damage the reactor would also decimate the city.

Their two-year study's report criticises Lucas Heights safety standards, especially in the event of a loss-of-coolant accident. Lucas Heights highlights the lack of safe storage and disposal systems in nuclear industries.

SYDNEY NUKE WASTE ROUTE

Highly toxic nuclear fuel waste will be 'secretly' transported through the streets of Sydney four times this year.

450 spent nuclear fuel rods from the Lucas Heights reactor will be driven through densely populated suburbs, probably through St George to Port Botany. Many of areas on the route are 'nuclear-free zones'.

The fuel rods are some of 1,500 held in 'temporary storage' in holes lined with stainless steel at Lucas Heights. Each shipment is expected to consist of about 100 rods containing a total of 50 grams of plutonium.

Democrat Senator Richard Jones has suggested the waste be moved by helicopter.



Computers and Miscarriages

A four year US study has found that a very high percentage of women who work at computer terminals for 20 hours a week or more have miscarriages.

The study of 1,600 women in California's Silicon Valley by the Kaiser Permanente Medical Group showed that the level of miscarriages was 80% higher for heavy users of Video Display Terminals (VDTs) than for other women. The percentage in non-VDT users was 32%, compared with 44.4% in heavy (20 hours or more) VDT occupations.

"It's too early to give advice," said Robert Hiatt, senior epidemiologist at Kaiser Permanente. "I don't think women should be alarmed, but it justifies further study."

Graeme Elliott, a scientist at Australian Radiation Laboratories, claims the survey results do "indicate a problem", noting that the number of women surveyed is far greater than any other to date. Four related surveys of over 10,000 women are being undertaken in the US, UK, Canada and Denmark over the next 12-18 months.

Australian Computer World

Hess History

A British historian alleges that Hitler's deputy Rudolf Hess, who flew to Britain during World War II on a mystery peace mission, was murdered in Berlin's Spandau war crimes prison after 47 years of captivity.

Historian Hugh Thomas claims to have strong evidence that 93 year-old Hess was killed to prevent his imminent release. His jailers claim he hanged himself with an electric cord in August 1987. Says Thomas:

"There is no substance in the allegation that prisoner number 7, Rudolf Hess, committed suicide. On the contrary, there is overwhelming evidence that murder was committed."

In Thomas' book *Hess: A Tale of Two Murders*, Hess' family is said to have evidence that a suicide note found on his body was a fake and that British officials had destroyed crucial evidence. Hess was the only prisoner at Spandau since 1963.

Reuter



Antediluvian Library

Original pre-Biblical accounts describing a great ark and flood have been discovered in Iraq.

Baghdad University archaeologists excavating an ancient Mesopotamian city near Baghdad are unearthing thousands of clay tablets in a 2,500 year old library. Only 300 of the estimated 2,500 tablets have been examined, but they appear to be a complete version of a story of a great flood.

The tablets also include a creation myth which pre-dates the Old Testament accounts by at least 1,000 years.

-AAP

MORE NUKES IN SYDNEY

Seven nuclear-armed warships are entering Sydney Harbour in September. Prime Minister Hawke invited the vessels to take part in the Bicentennial Fleet Naval Review. Warships including the nuclear-armed aircraft carrier HMS Ark Royal and the battleship USS New Jersey, which carries nuclear-armed Tomahawk Missiles, and 49 other ships from 12 countries will be crammed into the harbour on September 26th and 27th.

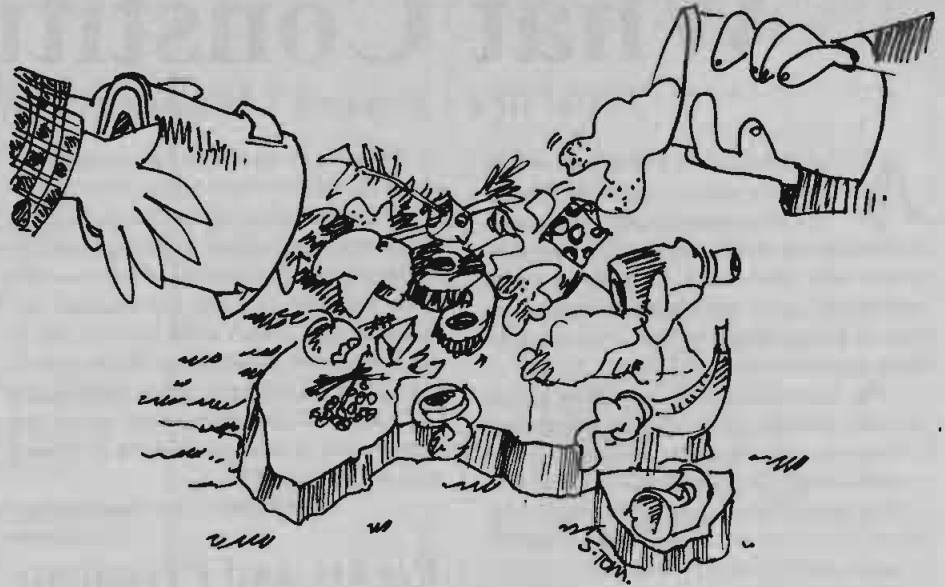
The Sydney Peace Squadron wants you to be part of their protest campaign. Similar protests in New Zealand resulted in their nuclear-free ports policy.

Contact the Peace Squadron at 498 King St, Newtown; (02) 519 7465.

World Satellite Birthday

Nelson Mandela passed his 70th birthday behind bars in July after the world tuned in to a global satellite celebration in June commemorating the event. In an effort to focus global consciousness on the plight of Mandela and his followers, hundreds of millions of people (estimates ranged between 200 and 800 million) were entertained by Sting, the Eurythmics, Joe Cocker, Joan Armatrading, Peter Gabriel, Phil Collins - and Caribbean, Arnhem Land and African native dancers and musicians, to name a few.

Lacking the wide publicity of earlier satellite hookups such as Bob Geldof's *Live Aid*, this 12 hour concert televised from Wembley Stadium in London nonetheless managed to momentarily focus world attention on the situation in Southern Africa.



Oz Dumping Ground

Australia could be a dumping ground for contaminated food, according to a Federal government scientist. Anthony Steel, a chemist at the Australian Government Analytical Laboratories (AGAL) in Sydney said that Australian foods destined for export undergo rigorous testing, but that imported foods do not.

AGAL checks only those samples of imported food sent in by government departments for analysis. Mr Steel, also NSW State Secretary of the Professional Officer's Association, is "incredulous at the fact that over the last couple of years there has been practically no testing at the point of entry.

"At the moment, we have been lucky because importers have been bringing in quality food; but once it becomes well known that Australia conducts minimal testing, who knows what could happen?"

Salmonella-infected and even radioactive foodstuffs have been recalled and destroyed in Australia. The June issue of *Consuming Interest* (the Australian Consumers' Association quarterly) said that few of 1987's estimated \$1.5 billion worth of imported foods underwent any testing for bacterial or chemical contamination. The magazine also reported a December 1986 Federal Government working group report which described poor recording of "failed" imports, dumping of goods rejected by other countries and the smuggling in of sub-standard goods by shipping them from port to port.

In June, Mr Steel called for a levy to be

imposed on all food importers to cover the costs of a stringent food testing program.

Medicine

Up to 20% of medicines on sale in Australia have not been tested either, but here the problem is the opposite; imported drugs are now carefully tested, whereas local-made ones have slipped through without testing.

Dr John McEwen, acting head of the Commonwealth drug evaluation branch, said that many Australian medicines have not been tested because of a legal loophole.

"We have no legal right to examine them because we work on the Customs Import act," he said.

"That means that all imported drugs are checked before sale, but locally-made ones are not." Dr McEwen cited several examples, including:

- *Glucomannan*, a diet pill which was supposed to reduce hunger by swelling in the stomach; 25 Australians had the pill surgically removed after it blocked their oesophagus.
- *Danthron*, a laxative which was removed from the market in 1987 because it caused cancer.
- A hair lice shampoo which caused conjunctivitis and cornea ulceration.

The only locally-made drugs which are tested are those subsidised by the Federal Government.

WORLD HERITAGE

We note a letter addressed to Peter Sawyer in the latest issue of *Nimbin News* which refutes allegations that World Heritage listing opens land up to a 'World Conservation Bank' (WCB), which we reported from *The Reaper* last issue:

"The World Conservation Bank is a myth arising from the International Wilderness Conference. Many prominent environmentalists found this conference disgusting and it is largely discredited.

"In short the WCB does not exist and is never going to control World Heritage areas. These areas are far safer as internationally protected areas than they will ever be under the profit conscious dictates of the impoverished nations. World Heritage deserves your support, as does the principle of an international organisation succeeding the interests of nations..." We thank Ian Peter for this contribution on this important issue.

Late Library Booked

The Library of Alexandria, that Mediterranean repository of ancient knowledge built in the city of Alexander the Great, is being rebuilt by the Egyptian government.

Put to the torch in 48 BC in the reign of Julius Caesar, the library's new foundation stone was laid in June near the original site by the Egyptian President, Hosni Mubarak.

Reuter

What Constitution?

How does it work? Where is it taking us?

Dean Winter

Australia and New Zealand are now the only parliamentary democracies with almost no constitutional limitations on excesses of power by governments over individuals. For many years individual rights and freedoms have given way to government policies and administrative convenience.

The Australian Constitution deals mainly with the structure and powers of government.

There is no comprehensive statement of Constitutional rights and freedoms as found in similar constitutions, such as those of India, West Germany, the USA or the Canadian Charter of Rights and Freedoms.

Those who framed our Constitution at the end of last century preferred to follow British tradition, which relied on the self-restraint and democratic spirit of its parliament to safeguard individual freedom. They felt that to define the rights of Australians would be an insult to Australian civilization.

There is no Constitutional guarantee of fair compensation if your property is resumed by a State government, and there are no guarantees to the rights to vote, to free speech, nor even the right to trial by jury (except for a Federal offence).

The Constitutional Commission - a body set up to report on revising the Australian Constitution - has recommended that the right to vote be recognised as a basic democratic right that should be given Constitutional protection in Federal, State and Territorial elections. Likewise for trial by jury;

"Bearing in mind that the rationale and essential function of trial by jury is the protection of the individual against the authority of the government, against administrators who might seek to subvert the due processes of law or be over-zealous in its enforcement, and against Judges remote from ordinary life or over-responsive to authority. If the right to trial by jury is sufficiently important to require Constitutional protection, then unless the Constitution is to be mocked the protection must be complete."

- First Report of the Constitutional Commission

Rights and Freedoms

There are other guaranteed rights and freedoms which the Commission recommends - freedom of conscience and religion, freedom of thought, belief and opinion, freedom of expression, freedom of peaceful assembly, freedom of association - and all the others we take for granted, like freedom of movement, rights if arrested, and fair compensation for resumed property.

They also recommend that the principle of *one vote one value* be adopted for all Federal, State and Territorial elections. This involves each member of the legislature representing roughly the same number of electors (with 10% tolerance).

The Individual and Democratic Rights Committee (including Peter Garrett), one of five committees set up by the Commission, has recommended that the status of 'citizen'

should be defined as;

- All people born in Australia.
- All natural born or adopted children of an Australian citizen.
- All naturalised Australians.

But the Commission itself has decided against this definition;

"While citizenship is an important matter, we do not think it is something that is suitably conferred and protected by one relatively short Constitutional provision..." They recommend that the government should be able to formulate laws on citizenship. At the moment they can only make laws about naturalisation and 'aliens'; the Constitution doesn't define who is eligible for citizenship, and any future government could change whom a citizen (and non-citizen) is at will.

The Commission recommends that the Constitution be altered so that the members of each house of a State Parliament be chosen directly by popular vote and not by indirect means such as by Parliament, Executive Government or an Electoral College (such as in the U.S.). We do of course directly elect all State parliaments at present, but under the Constitution it could be legally possible for a State Government to elect itself!

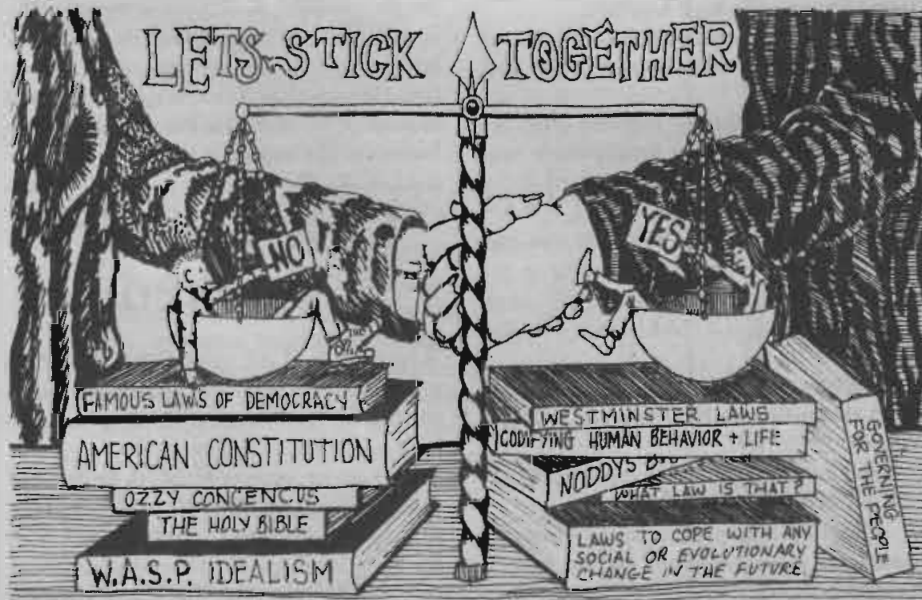
People Power

The last recommendation of the Individual and Democratic Rights Committee is very important;

"The Commission received a number of submissions from a surprisingly wide range of people arguing that the process of initiating amendment of the Constitution by referendum should be placed in the hands of the people and not monopolised by governments. This process is commonly referred to as 'citizens' initiative' or 'direct democracy.'"

If a large section of the population (i.e. 500,000 voters) sign a petition for a constitutional change, that change would be submitted to a referendum - the people could decide contentious issues directly. Opposition to this idea comes mostly from politicians. One argument against the proposal is that it would be abused by special interest groups; but these can't succeed at a referendum unless there is broad-based consensus.

This proposal was completely ignored by the Constitutional Commission and was not even mentioned in its recommendations.



Aboriginals Ignored

The Committee suggested there should be a new Preamble to the Constitution;

- "Whereas the people are drawn from a rich diversity of cultures, yet are one in their devotion to the Australian tradition of equality, the freedom of the person and the dignity of the individual.
- "Whereas Australia is an ancient land previously owned and occupied by Aboriginal people who never ceded ownership.
- "Whereas the Australian people look to share fairly in the plenty of our Commonwealth.
- "Whereas Australia is a continent of immense extent and unique in the world, demanding as our homeland our respect, devotion and wise management.."

However, the Commission has decided not to include this preamble in its recommendations. They said it was too difficult to define "the fundamental sentiments which Australians of all origins hold in common..." - but the rest of the Preamble was thrown out as well.

Parliamentary Changes

The House of Representatives determines the government, provides most government ministers and initiates most legislation. Its members are elected by the population and must perform constituency work in their own electorates.

The Senate is elected on the basis of equal representation of States rather than by population. The Senators don't represent particular electorates but the entire State.

The Commission has many recommendations concerning parliament. One is to extend the maximum term of the House of Representatives from three years to four. The vast majority of countries with democratic governments have four or five year terms. Of the 143 parliaments listed in Geneva, only 15 have terms of three years or less.

Another recommendation is that there be a three year *minimum* term so that elections can't be called opportunistically.

Our Monarch

The Commission recommends that there be no change to Australia's status as a Constitutional Monarchy, except to repeal certain powers of the Monarch;

At present, the Queen of England may disallow any Australian law within one year of it being signed for her by the Governor General. She may also disallow certain laws by not assenting to them within two years.

Another recommendation is that we have powers to make laws regarding the succession to the Throne and Regency in the sovereignty of Australia. If the U.K. alters its rules of succession (as it did during the abdication of Edward VII in 1936) those rules would not apply to Australia.

Other recommendations include recognition of local government and provision for the creation of new States.

September 3rd Referendum

On September the 3rd we are voting on four questions in a Referendum. These relate to;

- Parliamentary term increased to four years
- The right to vote
- Recognition of local government
- Extension of rights and freedoms including

trial by jury and freedom of religion.

For a proposal to be passed at a referendum it must win the support of the majority of voters in the majority of States, and the majority of voters overall. Referenda have changed the Constitution eight times since Federation. On 30 other occasions, Referenda have failed to achieve their majorities. But four of the 8 proposals were passed since 1967 (out of 14).

Think (and register!) before you vote; whatever your view, this chance may never come again.

This information has been compiled from the Summary of the First Report of the Constitutional Commission and the Summary of the Reports of the Advisory Committees to the Constitutional Commission. Copies of these documents are available FREE from the Commission; just ring (02) 29 8505 or (008) 02 3103.



Already In the Constitution

One important feature of the freedom of religion referendum is that the Constitution *already has a section which specifically guarantees freedom of religion;*

"The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth."

- Sect. 116, States Section, Commonwealth of Australia Constitution Act, 1901.

It's often considered this clause extends no Commonwealth powers over the States on Religious matters - but Section 109, also in the States section, says that; "When a law of a State is inconsistent with the law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid." This means that the Constitution already guarantees freedom of religion throughout Australia! We are actually voting on moving this section to another part of the Constitution - a Bill of Rights.

Furthermore, the Federal Government does have direct constitutional power to acquire land from the States in the interests

of National Heritage. Under Section 51 (XXXI), the Commonwealth can acquire property on just terms from a State or person for any purpose that the Commonwealth has power to make laws about. World Heritage justifies Commonwealth acquisition of State Forest, for instance.

Australia IS Neutral!!

Under the Australian Constitution, Australia IS A NEUTRAL NATION WHOSE REPRESENTATIVES MAY NOT DEMONSTRATE ANY ALLEGIANCE even to a friendly nation.

No Australian politician can show any "acknowledgement of allegiance, obedience or adherence to a foreign power" under Section 44(i.) of the Constitution. No Australian politician can, therefore, make any treaties of allegiance (ANZUS) or deals to "Stick Together" (ADHERE) with ANY FOREIGN POWER!

The recent arrests at Pine Gap have resulted in this clause being used to challenge the right of politicians to order Australians to protect foreign facilities.

John Sword

UN Planetary Survival Report

A United Nations study says that planet Earth can support the six billion people expected in the year 2000 - if economic development is balanced by environmental conservation.

The 1988 UN *State of the world population* report, released in May, called for urgent action to preserve land, air and water.

"World population, now over five billion, will be six billion by the end of the century.

"Nearly all of this growth is in developing countries, by definition those least capable of absorbing it," according to the report, which said industrialised countries must help developing nations solve population problems and develop technology that limits industrial environmental damage.

"With care and attention to balanced programs of conservation and sustainable development on the part of the international community, governments, industry and all levels of society, the Earth is capable of supporting the increasing needs of the next century," it said.

But the study states that food production worldwide must increase by 3% to 4% annually to feed these 6 billion people.

To do this, agricultural growth must be linked to land rehabilitation, organic fertilizers and pesticide alternatives and better water and irrigation management.

Each year, the study said, tropical forests shrink by 11 million hectares, 26 billion tons of topsoil are lost and six million new hectares of new deserts appear.

"Thirty one million hectares of forest in Europe and North America are already affected by acid in the air or soil. An unknown

amount of toxic and hazardous waste is being transported across national boundaries."

World population is growing despite the deaths of over 11 million children under the age of five in the developing world each year. About 100 million children under five suffer protein malnutrition.

The report said industrialised countries have less than a quarter of the world's population but consume 75% of the energy.

Slower growth and more even population distribution can take pressure off agricultural land, energy sources, vital watersheds and forest areas, giving more time to plan for sustainable development. China, Costa Rica, Cuba, Indonesia, South Korea, Sri Lanka and Thailand received praise for providing family planning services and policies to slow population growth.

The report recommends developing medium-sized cities which provide better services to relieve the pressure. It predicts half the world will be living in urban areas and one-fifth of city-dwellers will reside in "mega-cities" of ten million or more by the year 2000.

The 10 largest cities in 1985 were: Tokyo (18.8 million), Mexico City (17.3), Sao Paulo (15.9), New York (15.6), Shanghai (11.8), Calcutta (11.0), Buenos Aires (10.9), Rio de Janeiro (10.4), London (10.4) and Seoul (10.3).

In the year 2000, the report said, the 10 largest cities will be Mexico City (25.8 million), Sao Paulo (24.0), Tokyo (20.2), Calcutta (16.5), Bombay (16.0), New York (15.8), Seoul (13.5), Tehran (13.6), Shanghai (13.3) and Rio de Janeiro.

Reuter, AP

Indestructible CFCs

Orange Council in N.S.W. has discovered that it can't get rid of its fluorocarbon-propelled flysprays and air fresheners.

Aldermen voted to destroy their 11-month supply of 156 cans, worth about \$300, to help protect the earth's ozone layer. But no one can tell them how.

A State Pollution Control Commission officer said there is no way to destroy the cans without releasing the gaseous fluorocarbons. He said it might be possible to burn the cans in a high temperature incinerator at about 1,200 degrees centigrade.

"But there isn't one in Australia," he said. "So that's out."



Dolphins Love Sex

Masturbation, promiscuity and homosexuality all seem to be common in dolphins, according to results of studies of wild dolphins at Shark Bay, in Western Australia.

The famous Monkey Mia bottle-nose dolphin herd, which has been given nicknames like Holey Fin, Puck and Bee Bee, swim into shallows and allow people to feed and touch them.

Out in deeper water, a team of American scientists has noted "constant sexual interaction, both heterosexual and homosexual" in the herd, according to US journal *Science* last June.

Dolphins, like primates including chimpanzees, have promiscuous sex-lives; females often mate with many different males, and vice versa. Wild and captive dolphins masturbate and male dolphins have even been reported mounting small boats. In the US, two heavily-scarred males have kept constant company since 1975.

"So much of the interaction appears to be purely social," says Richard Conner, a University of Michigan student and Monkey Mia team member.

"The males are constantly mounting each other and mounting females not in oestrus.

"There'll be a group of four or five males and it seems like one of them goes, 'Let's get Pointer!' And the other males start mounting him with erections."

One theory is that pairing in male dolphins may promote co-operation in hunting and protection from attack.

A U.S. dolphin study pioneer in the US, Randy Wells of the Woods Hole Oceanographic Institute, says groups of males also work together to isolate a female and keep her with them. He has found that male bottle-nosed dolphins have unusually large testes - their sperm is 300 times more concentrated than in humans and 100 times that of chimpanzees.

"The early development of sexual behaviour, many years before sexual maturity, suggests that sex is quite important in the lives of these animals," says Wells.

According to Barbara Smuts of the University of Michigan, who has studied wild chimpanzees in Tanzania, large brain size is related to non-reproductive sexual behaviour in animals. Dolphins are believed to have evolved from land mammals; the ancestors of dolphins and chimpanzees are thought to have parted company 60 million years ago.

Pioneer Phones Home

Pioneer 10, an early US robot planetary probe which is continuing into deep space, is now nearly seven million kilometres away - but has yet to find and cross the edge of the solar system.

The heliosphere - the space in which the Sun's gases and magnetic field create an enveloping shield against incoming interstellar gases and radiation - was once thought to extend only to the orbit of Jupiter. But Pioneer is still reporting solar wind, the 1.6 million km/h flow of charged gases from the Sun which creates a thin "atmosphere" throughout the solar system.

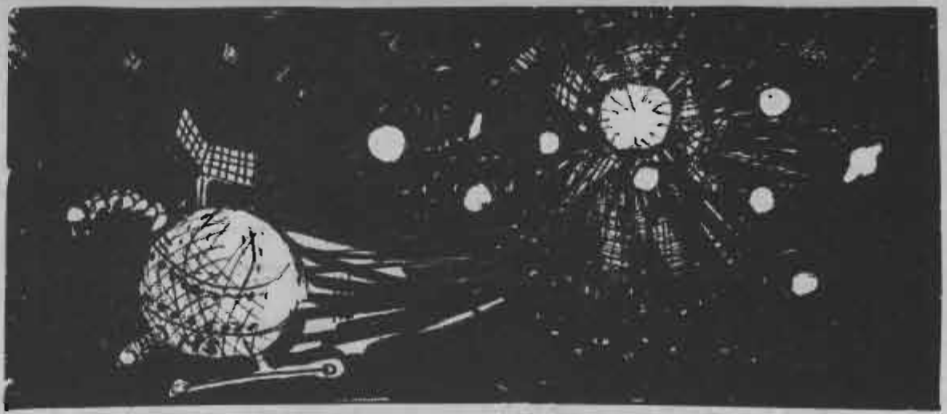
The 227 kg craft, cruising at 45,440 km/h, still transmits faint reports using 1972 power supply, solar cells and computer equipment. After becoming the first spacecraft to traverse the asteroid belt beyond Mars and conduct a reconnaissance of Jupiter (which was supposed to be the limit of its voyage), Pioneer is now 45 times the distance from the Earth to the Sun, which is so dim that Pioneer can no longer use it for guidance. It's so far beyond Pluto, whose orbit it crossed five years ago, that radio signals take 12 and a half hours to make the round trip from Earth.

Mr. Robert Jackson, deputy director of the Ames Research Centre in Mountain View, California, says Pioneer's power supply should continue transmitting data for at least four years, possibly much longer - maybe long enough for Pioneer to report on conditions where the heliosphere ends and true interstellar space begins.

"In the next three years we have a strong chance of encountering the boundary," said Dr. James Van Allen, a physicist at the University of Iowa who discovered the Earth's radiation belts. He and Darrell Judge said years of observation suggest the heliosphere's size fluctuates widely over an 11-year cycle.

"It's quite a dynamic situation," Dr Van Allen said. "Strangely enough, when solar activity is at a minimum in the cycle, the pressure of the solar wind is greater and this expands the heliosphere. At solar maximum, there's more turbulence, but not the same momentum, and so the heliosphere contracts."

In 1983, Pioneer scientists discovered a huge sheet of electrical current aligned with the Sun's equator and invisibly surrounding it in a huge ring. This current sheet undulates continuously in harmony with the Sun's rotation.



Whale & Dolphin Conference

The First International Whale and Dolphin conference was held at Valla Beach on the NSW North Coast in May. People came from across Australia and the world to celebrate this conference of over a dozen "brilliant minds and hearts", including John C. Lilly, Burnum Burnum and representatives of cetacean rescue groups and societies.

Leading researchers and 'dolphin dreaming' exponents fleshed out the weekend with intellectual and intuitive insights and experiences.

Dr Horace Dobbs, an author and scientist who leads an international campaign to free captive dolphins, gave a paper on curing chronic depression by taking people out to meet friendly dolphins in the wild.

Over 200 delegates from 18 countries approved a resolution at the end of the conference calling for recognition "that human survival is inseparable from the health and welfare of all species and of the right to life of free species in their rightful domain." They ask that the governments of Japan, the Faroe Islands, Denmark, the U.S. and Mexico end the millions of needless cetacean deaths at human hands.

Tuna fishermen are still taking a heavy toll on dolphin lives; Japanese tuna boats slaughter about 50,000 dolphins annually, while about 20,000 die in American waters, accidentally fouled in tuna nets. Off Mexico, up to 200,000 dolphins die in tuna nets annually according to the conference, which asked Prime Minister Hawke to exert influence to end Japanese whaling activities in Antarctic waters 3,000 km from Perth. The Japanese are killing 300 Minke whales for 'scientific purposes' there this year.

The resolution also calls for "positive action to restore the peace and purity of the world's oceans."

Whales Return

Australia's eastern humpback whales are returning, with large pods of breeding whales being sighted off the Queensland coast. Now whale-watching is becoming a growth industry.

Estimates of eastern Australia's original humpback population range up to 10,000; by the last whaling season of 1963-4, humpbacks had been decimated to between 200 and 500 whales. Estimates now place their number at about 1,000.

"We're very concerned about the impact of tourism," says Professor Michael Bryden of Sydney University, who is studying humpbacks at Hervey Bay near Fraser Island. "Too much boating activity could disrupt their mating, and mother-calf pairs could be broken up.

"Several local boats had started up whale-watching trips, and we have heard by word of mouth that the local tourist trade benefited by about \$1 million" last year.

A lone British yachtsman was rescued by an RAF jet earlier this year after a pod of 20 whales destroyed his sloop Hyccup in the mid-Atlantic.

41 year-old David Sellings was taking part in a solo Trans-Atlantic race when the whales destroyed his 7.5 metre sloop 1,600km from land.

"It's very unusual for whales to attack a boat, but not unknown," said a RAF rescue spokesperson, who suggested the whales may have been protecting their young.

